



STATE OF UTAH - DEPARTMENT OF ADMINISTRATIVE SERVICES

**Division of Facilities Construction and Management**

DFCM

**Request For Bids For Construction Services  
Two-Stage Bidding Process**

**Stage II – Paving Contractor's Bidders List  
Invitation to Bid**

April 4, 2006

**MOTOCROSS TRACK  
IMPROVEMENTS  
OFF HIGHWAY VEHICLE PARK**

**DIVISION OF PARKS AND RECREATION  
SALT LAKE CITY, UTAH**

DFCM Project No. 05261510

King Engineering  
2825 East Cottonwood Parkway, Suite 500  
Salt Lake City, Utah 84121  
Phone: (801)-990-3170  
Fax: (801)-990-3293

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Current copies of the following documents are hereby made part of these contract documents by reference. These documents are available on the DFCM web site at <http://dfcm.utah.gov> or are available upon request from DFCM:

DFCM General Conditions dated May 25, 2005

DFCM Application and Certificate for Payment dated May 25, 2005

Technical Specifications:

Drawings:

**The Agreement and General Conditions dated May 25, 2005 have been updated from versions that were formally adopted and in use prior to this date. The changes made to the General Conditions are identified in a document entitled Revisions to General Conditions that is available on DFCM's web site at <http://dfcm.utah.gov>**

## **INVITATION TO BID**

**ONLY CONTRACTORS PREVIOUSLY SHORT-LISTED DURING STAGE I  
ARE ALLOWED TO BID ON THIS PROJECT**

The State of Utah - Division of Facilities Construction and Management (DFCM) is requesting bids for the construction of the following project:

**MOTOCROSS TRACK IMPROVEMENTS - OFF HIGHWAY VEHICLE PARK**  
**DIVISION OF PARKS AND RECREATION – SALT LAKE CITY, UTAH**  
**DFCM PROJECT NO: 05261510**

Project Description: Site earthwork and creation of new Motocross Track, installation of irrigation pump house and irrigation system for dust control. Construction Cost Estimate: \$380,000.00

<b><u>FIRM NAME</u></b>	<b><u>POINT OF CONTACT</u></b>	<b><u>PHONE</u></b>	<b><u>FAX</u></b>
Consolidated Paving & Concrete	Mr. Gene Sase	(801) 622-1100	(801) 622-1103
DRD Paving, LLC	Mr. David O. Harrison	(801) 288-1001	(801) 288-1001
Geneva Rock Products, Inc.	Mr. Albert T. Schellenberg	(801) 281-7917	(801) 281-7939
Granite Construction Company	Mr. Alex Rountree	(801) 731-3131	(801) 731-3161
Kilgore Paving and Maintenance	Mr. Jason Kilgore	(801) 364-2777	(801) 364-2722
Miller Paving, Inc.	Mr. Frank Burns	(801) 262-5922	(801) 262-3254
Morgan Asphalt, Inc	Mr. Thomas W. Morgan	(801) 595-0010	(801) 595-0020
Post Asphalt Paving	Mr. Jeff Post	(801) 732-0205	(801) 732-0206
Savage Asphalt	Mr. Ben Savage	(801) 280-4441	(801) 280-2889
Staker and Parson Companies	Mr. Brad Hansen	(801) 731-1111	(801) 409-2687

The bid documents will be available on Tuesday April 4, 2006 on the DFCM web page at <http://dfcm.utah.gov> and CDs will be distributed at the **MANDATORY** pre-bid meeting and site visit which will be held at 2:00 PM on Tuesday April 4, 2006 in the conference room of the Off Highway Vehicle Park at 2800 North Rose Park Lane in Salt Lake City, Utah (located on the north side of the I-215 2200 North Exit in Salt Lake). All short listed prime contractors wishing to bid on this project must attend this meeting. For questions regarding this project, please contact Dan Clark, Project Manager, DFCM, at (801)-538-3725. No others are to be contacted regarding this project.

Bids must be submitted by 3:00 PM on Thursday, April 13, 2006 to DFCM, 4110 State Office Building, Salt Lake City, Utah 84114. Bids will be opened and read aloud in the DFCM Conference Room, 4110 State Office Building, Salt Lake City, Utah. Note: Bids must be received at 4110 State Office Building by the specified time. The contractor shall comply with and require all of its subcontractors to comply with the license laws as required by the State of Utah.

A bid bond in the amount of five percent (5%) of the bid amount, made payable to the Division of Facilities Construction and Management on DFCM's bid bond form, shall accompany the bid.

The Division of Facilities Construction & Management reserves the right to reject any or all bids or to waive any formality or technicality in any bid in the interest of the State.

**DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT**  
**MARLA WORKMAN, CONTRACT COORDINATOR**  
4110 State Office Bldg., Salt Lake City, Utah 84114

## **STAGE II BIDDING PROCESS**

### **ONLY CONTRACTORS PREVIOUSLY SHORT-LISTED DURING STAGE I ARE ALLOWED TO BID ON THIS PROJECT**

#### **1. Invitational Bid Procedures**

Invitation to Bid: DFCM will notify each short-listed firm via e-mail and/or fax when a project is ready for construction services.

Bid Documents: Bidding documents including plans and specifications (if applicable) may be obtained by accessing DFCM's web page at <http://dfcm.utah.gov> or at DFCM's office 4110 State Office Building, Salt Lake City, Utah 84114.

Mandatory Pre-Bid Site Meeting: If required, the schedule contained in this document will indicate the date, time, and place of the mandatory pre-bid site meeting. At this meeting, contractors will receive additional instructions about the project and have an opportunity to ask questions about project details. If a firm fails to attend a pre-bid site meeting labeled "Mandatory" they will not be allowed to bid on the project.

Written Questions: The schedule contained in this document will indicate the deadline for submitting questions in writing to the DFCM Representative pertaining to this project.

Final Addendum: The schedule contained in this document will indicate the deadline for DFCM issuing the final addendum clarifying questions and changes to the scope of work. Contractors are responsible for obtaining and responding to information contained in the addenda.

Submitting Bids: Bids must be submitted to DFCM, 4110 State Office Building, Salt Lake City, Utah 84114 by the deadline indicated on the schedule contained in this document. Bids submitted after the deadline will not be accepted. Bids will be opened at DFCM on the date, time, and place indicated on the schedule. (Additional information pertaining to bidding is contained later in this document). It is your responsibility to allow for the time needed to park on Capitol Hill as recent construction activity has made the parking more difficult. Identification is required to enter the building.

Subcontractors List: The firm selected for the project must submit a list of all subcontractors by the deadline indicated on the schedule contained in this document. (Additional information pertaining to subcontractor lists is contained later in this document)

#### **2. Drawings and Specifications, Other Contract Documents**

Drawings and Specifications, as well as other available Contract Documents, may be obtained as stated in the Notice to Contractors.

3. **Bids**

Before submitting a bid, each bidder shall carefully examine the Contract Documents; shall visit the site of the Work; shall fully inform themselves as to all existing conditions and limitations; and shall include in the bid the cost of all items required by the Contract Documents. If the bidder observes that portions of the Contract Documents are at variance with applicable laws, building codes, rules, regulations or contain obvious erroneous or uncoordinated information, the bidder shall promptly notify the DFCM Representative and the necessary changes shall be accomplished by Addendum.

The bid, bearing original signatures, must be typed or handwritten in ink on the Bid Form provided in the procurement documents and submitted in a sealed envelope at the location specified by the Notice to Contractor's prior to the published deadline for the submission of bids.

Bid bond security, in the amount of five percent (5%) of the bid, made payable to the Division of Facilities Construction and Management, shall accompany bid. **THE BID BOND MUST BE ON THE BID BOND FORM PROVIDED IN THE PROCUREMENT DOCUMENTS IN ORDER TO BE CONSIDERED AN ACCEPTABLE BID.**

If the bid bond security is submitted on a bid bond form other than the DFCM's required bid bond form, and the bid security meets all other legal requirements, the bidder will be allowed to provide an acceptable bid bond by the close of business on the next business day following notification by DFCM of submission of a defective bid bond security. **Note: A cashier's check cannot be used as a substitute for a bid bond.**

4. **Contract and Bond**

The Contractor's Agreement will be in the form bound in the specifications. The Contract Time will be as indicated in the bid. The successful bidder, simultaneously with the execution of the Contract Agreement, will be required to furnish a performance bond and a payment bond, both bearing original signatures, upon the forms provided in the procurement documents. The performance and payment bonds shall be for an amount equal to one hundred percent (100%) of the Contract Sum and secured from a company that meets the requirements specified in the requisite forms. Any bonding requirements for Subcontractors will be specified in the Supplementary General Conditions.

5. **Listing of Subcontractors**

Listing of Subcontractors shall be as summarized in the “Instructions and Subcontractor’s List Form”, which are included as part of these Contract Documents. The subcontractors list shall be delivered to DFCM or faxed to DFCM at (801)538-3677 within 24 hours of the bid opening. Requirements for listing additional subcontractors will be listed in the Contract Documents.

DFCM retains the right to audit or take other steps necessary to confirm compliance with requirements for the listing and changing of subcontractors. Any contractor who is found to not be in compliance with these requirements is subject to a debarment hearing and may be debarred from consideration for award of contract for a period of up to three years.

6. **Interpretation of Drawings and Specifications**

If any person or entity contemplating submitting a bid is in doubt as to the meaning of any part of the drawings, specifications or other Contract Documents, such person shall submit to the DFCM Representative a request for an interpretation thereof. The person or entity submitting the request will be responsible for its prompt delivery. Any interpretation of the proposed documents will be made only by Addenda duly issued and a copy of such Addenda will be mailed or delivered to each person or entity receiving a set of documents. Neither DFCM nor A/E will be responsible for any other explanations or interpretations of the proposed documents. A/E shall be deemed to refer to the architect or engineer hired by DFCM as the A/E or Consultant for the Project.

7. **Addenda**

Any Addenda issued during the time of bidding shall become part of the Contract Documents made available to the bidders for the preparation of the bid, shall be covered in the bid, and shall be made a part of the Contract.

8. **Award of Contract**

The Contract will be awarded as soon as possible to the lowest, responsive and responsible bidder, based on the lowest combination of base bid and acceptable prioritized alternates, provided the bid is reasonable, is in the interests of the State of Utah to accept and after applying the Utah Preference Laws in U.C.A. Title 63, Chapter 56. The DFCM reserves the right to waive any technicalities or formalities in any bid or in the bidding. Alternates will be accepted on a prioritized basis with Alternate 1 being highest priority, Alternate 2 having second priority, etc.

9. **DFCM Contractor Performance Rating**

DFCM will evaluate the performance of the Contractor. This evaluation may include comments from the User. The Contractor will have an opportunity to review and comment on the evaluation. Evaluations, including the Contractor's comments, may be considered in future selection in the evaluation of the Contractor's past performance.

10. **Licensure**

The Contractor shall comply with and require all of its Subcontractors to comply with the license laws as required by the State of Utah.

11. **Right to Reject Bids**

DFCM reserves the right to reject any or all Bids.

12. **Time is of the Essence**

The completion deadline for this project is **June 9, 2006**. Failure to meet the completion deadline may result in a poor performance rating from DFCM which may have a negative impact on your firm's ability to obtain future work with the state of Utah and may also result in liquidated damages being assessed. Time is of the essence in regard to all the requirements of the Contract Documents.

13. **Withdrawal of Bids**

Bids may be withdrawn on written request received from bidders within 24 hours after the bid opening if the contractor has made an error in preparing the bid.

14. **Product Approvals**

Where reference is made to one or more proprietary products in the Contract Documents, but restrictive descriptive materials of one or more manufacturer(s) is referred to in the Contract Documents, the products of other manufacturers will be accepted, provided they equal or exceed

the standards set forth in the drawings and specifications and are compatible with the intent and purpose of the design, subject to the written approval of the A/E. Such written approval must occur prior to the deadline established for the last scheduled addenda to be issued. The A/E's written approval will be in an issued Addendum. If the descriptive material is not restrictive, the products of other manufacturers specified will be accepted without prior approval provided they are compatible with the intent and purpose of the design as determined by the A/E.

15. **Financial Responsibility of Contractors, Subcontractors and Sub-subcontractors**

Contractors shall respond promptly to any inquiry in writing by the DFCM to any concern of financial responsibility of the Contractor, Subcontractor or Sub-subcontractor.

16. **Debarment.**

By submitting a bid, the Contractor certifies that neither it nor its principals, including project and site managers, have been, or are under consideration for, debarment or suspension, or any action that would exclude such from participation in a construction contract by any governmental department or agency. If the Contractor cannot certify this statement, attach to the bid a detailed written explanation which must be reviewed and approved by the DFCM as part of the requirements for award of the Project.





STATE OF UTAH - DEPARTMENT OF ADMINISTRATIVE SERVICES

**Division of Facilities Construction and Management**

**DFCM**

**PROJECT SCHEDULE**  
**Stage II = Two-Stage Bidding Process**

<b>PROJECT NAME: MOTOCROSS TRACK IMPROVEMENTS – OFF HIGHWAY VEHICLE PARK</b> <b>DIVISION OF PARKS &amp; RECREATION – SALT LAKE CITY, UTAH</b>				
<b>DFCM PROJECT # 05261510</b>				
<b>Event</b>	<b>Day</b>	<b>Date</b>	<b>Time</b>	<b>Place</b>
Stage II Bidding Documents Available	Tuesday	April 4, 2006		DFCM web site *
<b>Mandatory</b> Pre-bid Site Meeting	Tuesday	April 4, 2006	2:00 PM	Conference Room Off Highway Vehicle Park 2800 North Rose Park Lane SLC, UT
Last Day to Submit Questions	Monday	April 10, 2006	4:00 PM	DFCM 4110 State Office Bldg SLC, UT
Final Addendum Issued	Tuesday	April 11, 2006	4:00 PM	DFCM 4110 State Office Bldg SLC, UT or DFCM web site*
Prime Contractors Turn in Bid and Bid Bond / Bid Opening in DFCM Conference Room	Thursday	April 13, 2006	3:00 PM	DFCM 4110 State Office Bldg SLC, UT
Subcontractors List Due	Friday	April 14, 2006	3:00 PM	DFCM 4110 State Office Bldg SLC, UT
Project Completion Date	Friday	June 9, 2006		

\* DFCM's web site address is <http://dfcm.utah.gov>

**Division of Facilities Construction and Management****BID FORM**

NAME OF BIDDER \_\_\_\_\_ DATE \_\_\_\_\_

To the Division of Facilities Construction and Management  
4110 State Office Building  
Salt Lake City, Utah 84114

The undersigned, responsive to the "Notice to Contractors" and in accordance with the Request for Bids for the **MOTOCROSS TRACK IMPROVEMENTS - OFF HIGHWAY VEHICLE PARK - DIVISION OF PARKS & RECREATION - SALT LAKE CITY, UTAH - DFCM PROJECT NO. 05261510** and having examined the Contract Documents and the site of the proposed Work and being familiar with all of the conditions surrounding the construction of the proposed Project, including the availability of labor, hereby proposes to furnish all labor, materials and supplies as required for the Work in accordance with the Contract Documents as specified and within the time set forth and at the price stated below. This price is to cover all expenses incurred in performing the Work required under the Contract Documents of which this bid is a part:

I/We acknowledge receipt of the following Addenda: \_\_\_\_\_

Item #	Description	Unit	Quantity	Unit Price	Total Price
1.	Finish grading/fine grade and super elevation curves	SF	170,000	\$ _____	\$ _____
2.	Earthwork - jumps	CY	6,000	\$ _____	\$ _____
3.	6-inches concrete at gate includes compacted road base	SF	1,550	\$ _____	\$ _____
4.	Furnish/install 3/8-inch minus bedding sand 3-inches deep	CY	1,450	\$ _____	\$ _____
5.	Furnish/install 1-inch minus nominal diameter wood chips 3-inches deep	CY	1,450	\$ _____	\$ _____
6.	UP&L power extension across Redwood Road	LS	1	\$ _____	\$ _____
7.	Electrical extension from pole to pump house	LS	1	\$ _____	\$ _____
8.	Furnish/install pumps, vault, inlet, and pipe	LS	1	\$ _____	\$ _____
9.	Furnish/install shed for pump house and concrete pad complete	LS	1	\$ _____	\$ _____
10.	Furnish/install 1.5-inch hose	LF	1,600	\$ _____	\$ _____
11.	Furnish/install hose bib/quickcoupling	EA	5	\$ _____	\$ _____
12.	Furnish/install 6-inch gate valve includes box	EA	10	\$ _____	\$ _____

BID FORM  
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<u>Item #</u>	<u>Description</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Total Price</u>
13.	Furnish/install Series 800 6-inch solenoid control valve and box	EA	9	\$ _____	\$ _____
14.	Furnish/install 6-inch HDPE SDR 11 irrigation pipe	LF	4,100	\$ _____	\$ _____
15.	Furnish/install SR-2005 3-inch water gun w/concrete base (full & part circle)	EA	9	\$ _____	\$ _____
16.	Furnish/install irrigation controller	LS	1	\$ _____	\$ _____
17.	Furnish/install 42 man start gate	LS	1	\$ _____	\$ _____

For all work shown on the Drawings and described in the Specifications and Contract Documents, I/we agree to perform for the sum of:

\_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_)  
(In case of discrepancy, written amount shall govern)

I/We guarantee that the Work will be Substantially Complete by **June 9, 2006** after receipt of the Notice to Proceed, should I/we be the successful bidder, and agree to pay liquidated damages in the amount of **\$500.00** per day for each day after expiration of the Contract Time as stated in Article 3 of the Contractor's Agreement.

This bid shall be good for 45 days after bid opening.

Enclosed is a 5% bid bond, as required, in the sum of \_\_\_\_\_

The undersigned Contractor's License Number for Utah is \_\_\_\_\_

Upon receipt of notice of award of this bid, the undersigned agrees to execute the contract within ten (10) days, unless a shorter time is specified in Contract Documents, and deliver acceptable Performance and Payment bonds in the prescribed form in the amount of 100% of the Contract Sum for faithful performance of the contract. The Bid Bond attached, in the amount not less than five percent (5%) of the above bid sum, shall become the property of the Division of Facilities Construction and Management as liquidated damages for delay and additional expense caused thereby in the event that the contract is not executed and/or acceptable 100% Performance and Payment bonds are not delivered within time set forth.

Type of Organization: \_\_\_\_\_ (Corporation, Partnership, Individual, etc.)

Any request and information related to Utah Preference Laws: \_\_\_\_\_

Respectfully submitted,

ADDRESS:

\_\_\_\_\_  
Name of Bidder

\_\_\_\_\_  
Authorized Signature

## BID BOND

(Title 63, Chapter 56, U. C. A. 1953, as Amended)

### KNOW ALL PERSONS BY THESE PRESENTS:

That \_\_\_\_\_ hereinafter referred to as the "Principal," and \_\_\_\_\_, a corporation organized and existing under the laws of the State of \_\_\_\_\_, with its principal office in the City of \_\_\_\_\_ and authorized to transact business in this State and U. S. Department of the Treasury Listed, (Circular 570, Companies Holding Certificates of Authority as Acceptable Securities on Federal Bonds and as Acceptable Reinsuring Companies); hereinafter referred to as the "Surety," are held and firmly bound unto the STATE OF UTAH, hereinafter referred to as the "Obligee," in the amount of \$ \_\_\_\_\_ (5% of the accompanying bid), being the sum of this Bond to which payment the Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

**THE CONDITION OF THIS OBLIGATION IS SUCH** that whereas the Principal has submitted to Obligee the accompanying bid incorporated by reference herein, dated as shown, to enter into a contract in writing for the \_\_\_\_\_ Project.

**NOW, THEREFORE, THE CONDITION OF THE ABOVE OBLIGATION IS SUCH**, that if the said principal does not execute a contract and give bond to be approved by the Obligee for the faithful performance thereof within ten (10) days after being notified in writing of such contract to the principal, then the sum of the amount stated above will be forfeited to the State of Utah as liquidated damages and not as a penalty; if the said principal shall execute a contract and give bond to be approved by the Obligee for the faithful performance thereof within ten (10) days after being notified in writing of such contract to the Principal, then this obligation shall be null and void. It is expressly understood and agreed that the liability of the Surety for any and all defaults of the Principal hereunder shall be the full penal sum of this Bond. The Surety, for value received, hereby stipulates and agrees that obligations of the Surety under this Bond shall be for a term of sixty (60) days from actual date of the bid opening.

**PROVIDED, HOWEVER**, that this Bond is executed pursuant to provisions of Title 63, Chapter 56, Utah Code Annotated, 1953, as amended, and all liabilities on this Bond shall be determined in accordance with said provisions to same extent as if it were copied at length herein.

**IN WITNESS WHEREOF**, the above bounden parties have executed this instrument under their several seals on the date indicated below, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

**DATED** this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

**Principal's name and address (if other than a corporation):**

\_\_\_\_\_  
\_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

**Principal's name and address (if a corporation):**

\_\_\_\_\_  
\_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_  
(Affix Corporate Seal)

**Surety's name and address:**

\_\_\_\_\_  
\_\_\_\_\_

By: \_\_\_\_\_  
Attorney-in-Fact (Affix Corporate Seal)

STATE OF \_\_\_\_\_ )  
COUNTY OF \_\_\_\_\_ ) ss.

On this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_, personally appeared before me \_\_\_\_\_, whose identity is personally known to me or proved to me on the basis of satisfactory evidence, and who, being by me duly sworn, did say that he/she is the Attorney-in-fact of the above-named Surety Company, and that he/she is duly authorized to execute the same and has complied in all respects with the laws of Utah in reference to becoming sole surety upon bonds, undertakings and obligations, and that he/she acknowledged to me that as Attorney-in-fact executed the same.

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

My Commission Expires: \_\_\_\_\_

Resides at: \_\_\_\_\_

Agency: \_\_\_\_\_  
Agent: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_

NOTARY PUBLIC

Approved As To Form: May 25, 2005  
By Alan S. Bachman, Asst Attorney General

**Division of Facilities Construction and Management****INSTRUCTION AND SUBCONTRACTORS LIST FORM**

The three low bidders, as well as all other bidders that desire to be considered, are required by law to submit to DFCM within 24 hours of bid opening a list of **ALL** first-tier subcontractors, including the subcontractor's name, bid amount and other information required by Building Board Rule and as stated in these Contract Documents, on the following basis:

**PROJECTS UNDER \$500,000 - ALL SUBS \$20,000 OR OVER MUST BE LISTED**  
**PROJECTS \$500,000 OR MORE - ALL SUBS \$35,000 OR OVER MUST BE LISTED**

- Any additional subcontractors identified in the bid documents shall also be listed.
- The DFCM Director may not consider any bid submitted by a bidder if the bidder fails to submit a subcontractor list meeting the requirements of State law.
- List subcontractors for base bid as well as the impact on the list that the selection of any alternate may have.
- Bidder may not list more than one subcontractor to perform the same work.
- Bidder must list "Self" if performing work itself.

**LICENSURE:**

The subcontractor's name, the type of work, the subcontractor's bid amount, and the subcontractor's license number as issued by DOPL, if such license is required under Utah Law, shall be listed. Bidder shall certify that all subcontractors, required to be licensed, are licensed as required by State law. A subcontractor includes a trade contractor or specialty contractor and does not include suppliers who provide only materials, equipment, or supplies to a contractor or subcontractor.

**BIDDER LISTING 'SELF' AS PERFORMING THE WORK:**

Any bidder that is properly licensed for the particular work and intends to perform that work itself in lieu of a subcontractor that would otherwise be required to be on the subcontractor list, must insert the term 'Self' for that category on the subcontractor list form. Any listing of 'Self' on the sublist form shall also include the amount allocated for that work.

**'SPECIAL EXCEPTION':**

A bidder may list 'Special Exception' in place of a subcontractor when the bidder intends to obtain a subcontractor to perform the work at a later date because the bidder was unable to obtain a qualified or reasonable bid under the provisions of U.C.A. Section 63A-5-208(4). The bidder shall insert the term 'Special Exception' for that category of work, and shall provide documentation with the subcontractor list describing the bidder's efforts to obtain a bid of a qualified subcontractor at a reasonable cost and why the bidder was unable to obtain a qualified subcontractor bid. The Director must find that the bidder complied in good faith with State law requirements for any 'Special Exception' designation, in order for the bid to be considered. If awarded the contract, the Director shall supervise the bidder's efforts to obtain a qualified subcontractor bid. The amount of the awarded contract may not be adjusted to reflect the actual amount of the subcontractor's bid. Any listing of 'Special Exception' on the sublist form shall also include amount allocated for that work.

**INSTRUCTIONS AND SUBCONTRACTORS LIST FORM**  
**Page No. 2**

**GROUND FOR DISQUALIFICATION:**

The Director may not consider any bid submitted by a bidder if the bidder fails to submit a subcontractor list meeting the requirements of State law. Director may withhold awarding the contract to a particular bidder if one or more of the proposed subcontractors are considered by the Director to be unqualified to do the Work or for such other reason in the best interest of the State of Utah. Notwithstanding any other provision in these instructions, if there is a good faith error on the sublist form, at the sole discretion of the Director, the Director may provide notice to the contractor and the contractor shall have 24 hours to submit the correction to the Director. If such correction is submitted timely, then the sublist requirements shall be considered met.

**CHANGES OF SUBCONTRACTORS SPECIFICALLY IDENTIFIED ON SUBLIST FORM:**

Subsequent to twenty-four hours after the bid opening, the contractor may change its listed subcontractors only after receiving written permission from the Director based on complying with all of the following criteria.

- (1) The contractor has established in writing that the change is in the best interest of the State and that the contractor establishes an appropriate reason for the change, which may include, but not is not limited to, the following reasons: the original subcontractor has failed to perform, or is not qualified or capable of performing, and/or the subcontractor has requested in writing to be released.
- (2) The circumstances related to the request for the change do not indicate any bad faith in the original listing of the subcontractors.
- (3) Any requirement set forth by the Director to ensure that the process used to select a new subcontractor does not give rise to bid shopping.
- (4) Any increase in the cost of the subject subcontractor work is borne by the contractor.
- (5) Any decrease in the cost of the subject subcontractor work shall result in a deductive change order being issued for the contract for such decreased amount.
- (6) The Director will give substantial weight to whether the subcontractor has consented in writing to being removed unless the Contractor establishes that the subcontractor is not qualified for the work.

**EXAMPLE:**

Example of a list where there are only four subcontractors:

TYPE OF WORK	SUBCONTRACTOR, "SELF" OR "SPECIAL EXCEPTION"	SUBCONTRACTOR BID AMOUNT	CONT. LICENSE #
ELECTRICAL	ABCD Electric Inc.	\$350,000.00	123456789000
LANDSCAPING	"Self"	300,000.00	123456789000
CONCRETE (ALTERNATE #1)	XYZ Concrete Inc	298,000.00	987654321000
MECHANICAL	"Special Exception" (attach documentation)	Fixed at: 350,000.00	(TO BE PROVIDED AFTER OBTAINING SUBCONTRACTOR)

**PURSUANT TO STATE LAW - SUBCONTRACTOR BID AMOUNTS CONTAINED IN THIS  
SUBCONTRACTOR LIST SHALL NOT BE DISCLOSED UNTIL THE CONTRACT HAS BEEN AWARDED.**

**Division of Facilities Construction and Management****SUBCONTRACTORS LIST  
FAX TO 801-538-3677****PROJECT TITLE:** \_\_\_\_\_**Caution:** You must read and comply fully with instructions.

TYPE OF WORK	SUBCONTRACTOR, "SELF" OR "SPECIAL EXCEPTION"	SUBCONTRACTOR BID AMOUNT	CONT. LICENSE #

We certify that:

1. This list includes all subcontractors as required by the instructions, including those related to the base bid as well as any alternates.
2. We have listed "Self" or "Special Exception" in accordance with the instructions.
3. All subcontractors are appropriately licensed as required by State law.

FIRM: \_\_\_\_\_

DATE: \_\_\_\_\_

SIGNED BY: \_\_\_\_\_

**NOTICE:** FAILURE TO SUBMIT THIS FORM, PROPERLY COMPLETED AND SIGNED, AS REQUIRED IN THESE CONTRACT DOCUMENTS, SHALL BE GROUNDS FOR DFCMS REFUSAL TO ENTER INTO A WRITTEN CONTRACT WITH BIDDER. ACTION MAY BE TAKEN AGAINST BIDDERS BID BOND AS DEEMED APPROPRIATE BY DFCM. ATTACH A SECOND PAGE IF NECESSARY.

# **FUGITIVE DUST PLAN**

The Contractor will fill out the form and file the original with the Division of Air Quality and a copy of the form with the Division of Facilities Construction & Management, prior to the issuance of any notice to proceed.

The Contractor will be fully responsible for compliance with the Fugitive Dust Control Plan, including the adequacy of the plan, any damages, fines, liability, and penalty or other action that results from noncompliance.



**Utah Division of Air Quality**

*April 20, 1999*

**GUIDANCE THAT MUST BE CONSIDERED IN DEVELOPING AND SUBMITTING A  
DUST CONTROL PLAN FOR COMPLIANCE WITH R307-309-3, 4, 5, 6, 7**

Source Information:

1. Name of your operation (source): provide a name if the source is a construction site.
2. Address or location of your operation or construction site.
3. UTM coordinates or Longitude/Latitude of stationary emission points at your operation.
4. Lengths of the project, if temporary (time period).
5. Description of process (include all sources of dust and fugitive dust). Please, if necessary, use additional sheets of paper for this description. Be sure to mark it as an attachment.
6. Type of material processed or disturbed.
7. Amount of material processed (tons per year, tons per month, lbs./hr., and applicable units).

8. Destination of product (where will the material produced be used or transported, be specific, provide address or specific location), information needed for temporary relocation applicants.
9. Identify the individual who is responsible for the implementation and maintenance of fugitive dust control measures. List name(s), position(s) and telephone number(s).
10. List, and attach copies of any contract lease, liability agreement with other companies that may, or will, be responsible for dust control on site or on the project.

**Description of Fugitive Dust Emission Activities**  
**(Things to consider in addressing fugitive dust control strategies.)**

1. Type of activities (drilling and blasting, road construction, development construction, earth moving and excavation, handling and hauling materials, cleaning and leveling, etc).
2. List type of equipment generating the fugitive dust.
3. Diagram the location of each activity or piece of equipment on site. Please attach the diagram.
4. Provide pictures or drawings of each activity. Include a drawing of the unpaved/paved road network used to move loads “on” and “off” property.
5. Vehicle miles travels on unpaved roads associated with the activity (average speed).
6. Type of dust emitted at each source (coal, cement, sand, soil, clay, dust, etc.)
7. Estimate the size of the release area at which the activity occurs (square miles). For haul or dirt roads include total miles of road in use during the activity.

## **Description of Fugitive Dust Emission Controls on Site**

Control strategies must be designed to meet 20% opacity or less on site (a lesser opacity may be defined by Approval Order conditions or federal requirements such as NSPS), and control strategies must prevent exceeding 10% opacity from fugitive dust at the property boundary (site boundary) for compliance with R307-309-3.

1. Types of ongoing emission controls proposed for each activity, each piece of equipment, and haul roads.
2. Types of additional dust controls proposed for bare, exposed surfaces (chemical stabilization, synthetic cover, wind breaks, vegetative cover, etc).
3. Method of application of dust suppressant.
4. Frequency of application of dust suppressant.
5. Explain what triggers the use of a special control measure other than routine measures already in place, such as covered loads or measures covered by a permit condition (increase in opacity, high winds, citizen complaints, dry conditions, etc).
6. Explain in detail what control strategies/measures will be implemented off-hours, i.e., Saturdays/Sundays/Holidays, as well as 6 PM to 6 AM each day.

## **Description of Fugitive Dust Control Off-site**

Prevent, to the maximum extent possible, deposition of materials, which may create fugitive dust on public and private paved roads in compliance with R307-309-5, 6, 7.

1. Types of emission controls initiated by your operation that are in place “off” property (application of water, covered loads, sweeping roads, vehicle cleaning, etc.).
  
2. Proposed remedial controls that will be initiated promptly if materials, which may create fugitive dust, are deposited on public and private paved roads.

Submit the Dust Control Plan to:

Executive Secretary  
Utah Air Quality Board  
POB 144820  
15 North 1950 West  
Salt Lake City, Utah 84114-4820

Phone: (801) 536-4000  
FAX: (801) 536-4099

## **Fugitive Dust Control Plan Violation Report**

When a source is found in violation of R307-309-3 or in violation of the Fugitive Dust Control Plan, the source must submit a report to the Executive Secretary within 15 days after receiving a Notice of Violation. The report must include the following information:

1. Name and address of dust source.
2. Time and duration of dust episode.
3. Meteorological conditions during the dust episode.
4. Total number and type of fugitive dust activities and dust producing equipment within each operation boundary. If no change has occurred from the existing dust control plan, the source should state that the activity/equipment is the same.
5. Fugitive dust activities or dust producing equipment that caused a violation of R-307-309-3 or the source's dust control plan.
6. Reasons for failing to control dust from the dust generating activity or equipment.
7. New and/or additional fugitive dust control strategies necessary to achieve compliance with R307-309-3, 4, 5, 6, or 7.
8. If it can not be demonstrated that the current approved Dust Control Plan can result in compliance with R307-309-3 through 7, the Dust Control Plan must be revised so as to demonstrate compliance with 307-309-3 through 7. Within 30 days of receiving a fugitive dust Notice of Violation, the source must submit the revised Plan to the Executive Secretary for review and approval.

Submit the Dust Control Plan to:

Executive Secretary	Phone: (801) 536-4000
Utah Air Quality Board	FAX: (801) 536-4099
POB 144820	
15 North 1950 West	
Salt Lake City, Utah 84114-4820	

Attachments: DFCM Form FDR R-307-309, Rule 307-309

## CONTRACTOR'S AGREEMENT

FOR:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

THIS CONTRACTOR'S AGREEMENT, made and entered into this \_\_\_\_ day of \_\_\_\_\_, 20\_\_, by and between the DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT, hereinafter referred to as "DFCM", and \_\_\_\_\_, incorporated in the State of \_\_\_\_\_ and authorized to do business in the State of Utah, hereinafter referred to as "Contractor", whose address is \_\_\_\_\_.

WITNESSETH: WHEREAS, DFCM intends to have Work performed at \_\_\_\_\_  
\_\_\_\_\_.

WHEREAS, Contractor agrees to perform the Work for the sum stated herein.

NOW, THEREFORE, DFCM and Contractor for the consideration provided in this Contractor's Agreement, agree as follows:

**ARTICLE 1. SCOPE OF WORK.** The Work to be performed shall be in accordance with the Contract Documents prepared by \_\_\_\_\_ and entitled "\_\_\_\_\_  
\_\_\_\_\_."

The DFCM General Conditions ("General Conditions") dated May 25, 2005 on file at the office of DFCM and available on the DFCM website, are hereby incorporated by reference as part of this Agreement and are included in the specifications for this Project. All terms used in this Contractor's Agreement shall be as defined in the Contract Documents, and in particular, the General Conditions.

The Contractor Agrees to furnish labor, materials and equipment to complete the Work as required in the Contract Documents which are hereby incorporated by reference. It is understood and agreed by the parties hereto that all Work shall be performed as required in the Contract Documents and shall be subject to inspection and approval of DFCM or its authorized representative. The relationship of the Contractor to the DFCM hereunder is that of an independent Contractor.

**ARTICLE 2. CONTRACT SUM.** The DFCM agrees to pay and the Contractor agrees to accept in full performance of this Contractor's Agreement, the sum of \_\_\_\_\_ DOLLARS AND NO CENTS (\$\_\_\_\_\_.00), which is the base bid, and which sum also includes the cost of a 100%

CONTRACTOR'S AGREEMENT  
PAGE NO. 2

Performance Bond and a 100% Payment Bond as well as all insurance requirements of the Contractor. Said bonds have already been posted by the Contractor pursuant to State law. The required proof of insurance certificates have been delivered to DFCM in accordance with the General Conditions before the execution of this Contractor's Agreement.

**ARTICLE 3. TIME OF COMPLETION AND DELAY REMEDY.** The Work shall be Substantially Complete within \_\_\_\_\_ (\_\_\_\_) calendar days after the date of the Notice to Proceed. Contractor agrees to pay liquidated damages in the amount of \$\_\_\_\_\_ per day for each day after expiration of the Contract Time until the Contractor achieves Substantial Completion in accordance with the Contract Documents, if Contractor's delay makes the damages applicable. The provision for liquidated damages is: (a) to compensate the DFCM for delay only; (b) is provided for herein because actual damages can not be readily ascertained at the time of execution of this Contractor's Agreement; (c) is not a penalty; and (d) shall not prevent the DFCM from maintaining Claims for other non-delay damages, such as costs to complete or remedy defective Work.

No action shall be maintained by the Contractor, including its or Subcontractor or suppliers at any tier, against the DFCM or State of Utah for damages or other claims due to losses attributable to hindrances or delays from any cause whatsoever, including acts and omissions of the DFCM or its officers, employees or agents, except as expressly provided in the General Conditions. The Contractor may receive a written extension of time, signed by the DFCM, in which to complete the Work under this Contractor's Agreement in accordance with the General Conditions.

**ARTICLE 4. CONTRACT DOCUMENTS.** The Contract Documents consist of this Contractor's Agreement, the Conditions of the Contract (DFCM General Conditions, Supplementary and other Conditions), the Drawings, Specifications, Addenda and Modifications. The Contract Documents shall also include the bidding documents, including the Notice to Contractors, Instructions to Bidders/Proposers and the Bid/Proposal, to the extent not in conflict therewith and other documents and oral presentations that are documented as an attachment to the contract.

All such documents are hereby incorporated by reference herein. Any reference in this Contractor's Agreement to certain provisions of the Contract Documents shall in no way be construed as to lessen the importance or applicability of any other provisions of the Contract Documents.

**ARTICLE 5. PAYMENT.** The DFCM agrees to pay the Contractor from time to time as the Work progresses, but not more than once each month after the date of Notice to Proceed, and only upon Certificate of the A/E for Work performed during the preceding calendar month, ninety-five percent (95%) of the value of the labor performed and ninety-five percent (95%) of the value of materials furnished in place or on the site. The Contractor agrees to furnish to the DFCM invoices for materials purchased and on the site but not installed, for which the



CONTRACTOR'S AGREEMENT  
PAGE NO. 3

Contractor requests payment and agrees to safeguard and protect such equipment or materials and is responsible for safekeeping thereof and if such be stolen, lost or destroyed, to replace same.

Such evidence of labor performed and materials furnished as the DFCM may reasonably require shall be supplied by the Contractor at the time of request for Certificate of Payment on account. Materials for which payment has been made cannot be removed from the job site without DFCM's written approval. Five percent (5%) of the earned amount shall be retained from each monthly payment. The retainage, including any additional retainage imposed and the release of any retainage, shall be in accordance with UCA 13-8-5 as amended. Contractor shall also comply with the requirements of UCA 13-8-5, including restrictions of retainage regarding subcontractors and the distribution of interest earned on the retention proceeds. The DFCM shall not be responsible for enforcing the Contractor's obligations under State law in fulfilling the retention law requirements with subcontractors at any tier.

**ARTICLE 6. INDEBTEDNESS.** Before final payment is made, the Contractor must submit evidence satisfactory to the DFCM that all payrolls, materials bills, subcontracts at any tier and outstanding indebtedness in connection with the Work have been properly paid. Final Payment will be made after receipt of said evidence, final acceptance of the Work by the DFCM as well as compliance with the applicable provisions of the General Conditions.

Contractor shall respond immediately to any inquiry in writing by DFCM as to any concern of financial responsibility and DFCM reserves the right to request any waivers, releases or bonds from Contractor in regard to any rights of Subcontractors (including suppliers) at any tier or any third parties prior to any payment by DFCM to Contractor.

**ARTICLE 7. ADDITIONAL WORK.** It is understood and agreed by the parties hereto that no money will be paid to the Contractor for additional labor or materials furnished unless a new contract in writing or a Modification hereof in accordance with the General Conditions and the Contract Documents for such additional labor or materials has been executed. The DFCM specifically reserves the right to modify or amend this Contractor's Agreement and the total sum due hereunder either by enlarging or restricting the scope of the Work.

**ARTICLE 8. INSPECTIONS.** The Work shall be inspected for acceptance in accordance with the General Conditions.

**ARTICLE 9. DISPUTES.** Any dispute, PRE or Claim between the parties shall be subject to the provisions of Article 7 of the General Conditions. DFCM reserves all rights to pursue its rights and remedies as provided in the General Conditions.

**ARTICLE 10. TERMINATION, SUSPENSION OR ABANDONMENT.** This Contractor's Agreement may be terminated, suspended or abandoned in accordance with the General Conditions.

**ARTICLE 11. DFCM'S RIGHT TO WITHHOLD CERTAIN AMOUNT AND MAKE USE THEREOF.** The DFCM may withhold from payment to the Contractor such amount as, in DFCM's judgment, may be necessary to pay just claims against the Contractor or Subcontractor at any tier for labor and services rendered and materials furnished in and about the Work. The DFCM may apply such withheld amounts for the payment of such claims in DFCM's discretion. In so doing, the DFCM shall be deemed the agent of Contractor and payment so made by the DFCM shall be considered as payment made under this Contractor's Agreement by the DFCM to the Contractor. DFCM shall not be liable to the Contractor for any such payment made in good faith. Such withholdings and payments may be made without prior approval of the Contractor and may be also be prior to any determination as a result of any dispute, PRE, Claim or litigation.

**ARTICLE 12. INDEMNIFICATION.** The Contractor shall comply with the indemnification provisions of the General Conditions.

**ARTICLE 13. SUCCESSORS AND ASSIGNMENT OF CONTRACT.** The DFCM and Contractor, respectively bind themselves, their partners, successors, assigns and legal representatives to the other party to this Agreement, and to partners, successors, assigns and legal representatives of such other party with respect to all covenants, provisions, rights and responsibilities of this Contractor's Agreement. The Contractor shall not assign this Contractor's Agreement without the prior written consent of the DFCM, nor shall the Contractor assign any moneys due or to become due as well as any rights under this Contractor's Agreement, without prior written consent of the DFCM.

**ARTICLE 14. RELATIONSHIP OF THE PARTIES.** The Contractor accepts the relationship of trust and confidence established by this Contractor's Agreement and covenants with the DFCM to cooperate with the DFCM and A/E and use the Contractor's best skill, efforts and judgment in furthering the interest of the DFCM; to furnish efficient business administration and supervision; to make best efforts to furnish at all times an adequate supply of workers and materials; and to perform the Work in the best and most expeditious and economic manner consistent with the interests of the DFCM.

**ARTICLE 15. AUTHORITY TO EXECUTE AND PERFORM AGREEMENT.** Contractor and DFCM each represent that the execution of this Contractor's Agreement and the performance thereunder is within their respective duly authorized powers.

**ARTICLE 16. ATTORNEY FEES AND COSTS.** Except as otherwise provided in the dispute resolution provisions of the General Conditions, the prevailing party shall be entitled to reasonable attorney fees and costs incurred in any action in the District Court and/or appellate body to enforce this Contractor's Agreement or recover damages or any other action as a result of a breach thereof.

CONTRACTOR'S AGREEMENT  
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**IN WITNESS WHEREOF**, the parties hereto have executed this Contractor's Agreement on the day and year stated hereinabove.

**CONTRACTOR:** \_\_\_\_\_

\_\_\_\_\_  
Signature Date

Title: \_\_\_\_\_

State of \_\_\_\_\_ )  
County of \_\_\_\_\_ )

\_\_\_\_\_  
Please type/print name clearly

On this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, personally appeared before me, \_\_\_\_\_, whose identity is personally known to me (or proved to me on the basis of satisfactory evidence) and who by me duly sworn (or affirmed), did say that he (she) is the \_\_\_\_\_ (title or office) of the firm and that said document was signed by him (her) in behalf of said firm.

(SEAL)

\_\_\_\_\_  
**Notary Public**

My Commission Expires \_\_\_\_\_

APPROVED AS TO AVAILABILITY  
OF FUNDS:

\_\_\_\_\_  
Financial Manager, Date  
Division of Facilities Construction  
and Management

**DIVISION OF FACILITIES  
CONSTRUCTION AND MANAGEMENT**

\_\_\_\_\_  
Manager - Date  
Capital \_\_\_\_\_

APPROVED AS TO FORM:  
ATTORNEY GENERAL  
May 25, 2005  
By: Alan S. Bachman  
Asst Attorney General

APPROVED FOR EXPENDITURE:  
\_\_\_\_\_  
Division of Finance Date

**PERFORMANCE BOND**  
(Title 63, Chapter 56, U. C. A. 1953, as Amended)

That \_\_\_\_\_ hereinafter referred to as the "Principal" and \_\_\_\_\_, a corporation organized and existing under the laws of the State of \_\_\_\_\_, with its principal office in the City of \_\_\_\_\_ and authorized to transact business in this State and U. S. Department of the Treasury Listed (Circular 570, Companies Holding Certificates of Authority as Acceptable Securities on Federal Bonds and as Acceptable Reinsuring Companies); hereinafter referred to as the "Surety," are held and firmly bound unto the State of Utah, hereinafter referred to as the "Obligee," in the amount of \_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_) for the payment whereof, the said Principal and Surety bind themselves and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

**WHEREAS**, the Principal has entered into a certain written Contract with the Obligee, dated the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, to construct \_\_\_\_\_ in the County of \_\_\_\_\_, State of Utah, Project No. \_\_\_\_\_, for the approximate sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_), which Contract is hereby incorporated by reference herein.

**NOW, THEREFORE**, the condition of this obligation is such that if the said Principal shall faithfully perform the Contract in accordance with the Contract Documents including, but not limited to, the Plans, Specifications and conditions thereof, the one year performance warranty, and the terms of the Contract as said Contract may be subject to Modifications or changes, then this obligation shall be void; otherwise it shall remain in full force and effect.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the state named herein or the heirs, executors, administrators or successors of the Owner.

The parties agree that the dispute provisions provided in the Contract Documents apply and shall constitute the sole dispute procedures of the parties.

**PROVIDED, HOWEVER**, that this Bond is executed pursuant to the Provisions of Title 63, Chapter 56, Utah Code Annotated, 1953, as amended, and all liabilities on this Bond shall be determined in accordance with said provisions to the same extent as if it were copied at length herein.

**IN WITNESS WHEREOF**, the said Principal and Surety have signed and sealed this instrument this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

**WITNESS OR ATTESTATION:**

**PRINCIPAL:**

\_\_\_\_\_

\_\_\_\_\_

By: \_\_\_\_\_  
(Seal)

Title: \_\_\_\_\_

**WITNESS OR ATTESTATION:**

**SURETY:**

\_\_\_\_\_

\_\_\_\_\_

By: \_\_\_\_\_  
Attorney-in-Fact (Seal)

STATE OF \_\_\_\_\_ )  
 ) ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, personally appeared before me \_\_\_\_\_, whose identity is personally known to me or proved to me on the basis of satisfactory evidence, and who, being by me duly sworn, did say that he/she is the Attorney in-fact of the above-named Surety Company and that he/she is duly authorized to execute the same and has complied in all respects with the laws of Utah in reference to becoming sole surety upon bonds, undertakings and obligations, and that he/she acknowledged to me that as Attorney-in-fact executed the same.

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

My commission expires: \_\_\_\_\_

Resides at: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

**Agency:** \_\_\_\_\_  
**Agent:** \_\_\_\_\_  
**Address:** \_\_\_\_\_  
**Phone:** \_\_\_\_\_

Approved As To Form: May 25, 2005  
By Alan S. Bachman, Asst Attorney General  
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# PAYMENT BOND

(Title 63, Chapter 56, U. C. A. 1953, as Amended)

## KNOW ALL PERSONS BY THESE PRESENTS:

That \_\_\_\_\_ hereinafter referred to as the "Principal," and \_\_\_\_\_, a corporation organized and existing under the laws of the State of \_\_\_\_\_ authorized to do business in this State and U. S. Department of the Treasury Listed (Circular 570, Companies Holding Certificates of Authority as Acceptable Securities on Federal Bonds and as Acceptable Reinsuring Companies); with its principal office in the City of \_\_\_\_\_, hereinafter referred to as the "Surety," are held and firmly bound unto the State of Utah hereinafter referred to as the "Obligee," in the amount of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_) for the payment whereof, the said Principal and Surety bind themselves and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

**WHEREAS**, the Principal has entered into a certain written Contract with the Obligee, dated the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, to construct \_\_\_\_\_ in the County of \_\_\_\_\_, State of Utah, Project No. \_\_\_\_\_ for the approximate sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_), which contract is hereby incorporated by reference herein.

**NOW, THEREFORE**, the condition of this obligation is such that if the said Principal shall pay all claimants supplying labor or materials to Principal or Principal's Subcontractors in compliance with the provisions of Title 63, Chapter 56, of Utah Code Annotated, 1953, as amended, and in the prosecution of the Work provided for in said Contract, then, this obligation shall be void; otherwise it shall remain in full force and effect.

That said Surety to this Bond, for value received, hereby stipulates and agrees that no changes, extensions of time, alterations or additions to the terms of the Contract or to the Work to be performed thereunder, or the specifications or drawings accompanying same shall in any way affect its obligation on this Bond, and does hereby waive notice of any such changes, extensions of time, alterations or additions to the terms of the Contract or to the Work or to the specifications or drawings and agrees that they shall become part of the Contract Documents.

**PROVIDED, HOWEVER**, that this Bond is executed pursuant to the provisions of Title 63, Chapter 56, Utah Code Annotated, 1953, as amended, and all liabilities on this Bond shall be determined in accordance with said provisions to the same extent as if it were copied at length herein.

**IN WITNESS WHEREOF**, the said Principal and Surety have signed and sealed this instrument this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

## WITNESS OR ATTESTATION:

\_\_\_\_\_

## PRINCIPAL:

\_\_\_\_\_

By: \_\_\_\_\_ (Seal)

Title: \_\_\_\_\_

## WITNESS OR ATTESTATION:

\_\_\_\_\_

## SURETY:

\_\_\_\_\_

By: \_\_\_\_\_ Attorney-in-Fact (Seal)

STATE OF \_\_\_\_\_ )  
 ) ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, personally appeared before me \_\_\_\_\_, whose identity is personally known to me or proved to me on the basis of satisfactory evidence, and who, being by me duly sworn, did say that he/she is the Attorney-in-fact of the above-named Surety Company, and that he/she is duly authorized to execute the same and has complied in all respects with the laws of Utah in reference to becoming sole surety upon bonds, undertakings and obligations, and that he/she acknowledged to me that as Attorney-in-fact executed the same.

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

My commission expires: \_\_\_\_\_

Resides at: \_\_\_\_\_

NOTARY PUBLIC

**Agency:** \_\_\_\_\_  
**Agent:** \_\_\_\_\_  
**Address:** \_\_\_\_\_  
**Phone:** \_\_\_\_\_

Approved As To Form: May 25, 2005  
By Alan S. Bachman, Asst Attorney General



STATE OF UTAH - DEPARTMENT OF ADMINISTRATIVE SERVICES  
**Division of Facilities Construction and Management**

**DFCM**

**CHANGE ORDER # \_\_\_\_\_**

CONTRACTOR: \_\_\_\_\_

AGENCY OR INSTITUTION: \_\_\_\_\_

PROJECT NAME: \_\_\_\_\_

PROJECT NUMBER: \_\_\_\_\_

CONTRACT NUMBER: \_\_\_\_\_

ARCHITECT: \_\_\_\_\_

DATE: \_\_\_\_\_

CONSTRUCTION CHANGE DIRECTIVE NO.	PROPOSAL REQUEST NO.	AMOUNT		DAYS	
		INCREASE	DECREASE	INCREASE	DECREASE

	Amount	Days	Date
ORIGINAL CONTRACT			
TOTAL PREVIOUS CHANGE ORDERS			
TOTAL THIS CHANGE ORDER			
ADJUSTED CONTRACT			

DFCM and Contractor agree that the terms, contract sum, scope of the Work and time specified in this Change Order shall constitute the full accord and satisfaction, and complete adjustment to the Contract and includes all direct and indirect costs and effects related to, incidental to, and/or reasonably implied from such change in the contract terms, sum, scope of the Work and time.

Contractor: \_\_\_\_\_ Date \_\_\_\_\_

Architect/Engineer: \_\_\_\_\_ Date \_\_\_\_\_

Agency or Institution: \_\_\_\_\_ Date \_\_\_\_\_

DFCM: \_\_\_\_\_ Date \_\_\_\_\_

Funding Verification: \_\_\_\_\_ Date \_\_\_\_\_



STATE OF UTAH - DEPARTMENT OF ADMINISTRATIVE SERVICES

**Division of Facilities Construction and Management****DFCM****CERTIFICATE OF SUBSTANTIAL COMPLETION**

PROJECT \_\_\_\_\_ PROJECT NO: \_\_\_\_\_

AGENCY/INSTITUTION \_\_\_\_\_

AREA ACCEPTED \_\_\_\_\_

The Work performed under the subject Contract has been reviewed on this date and found to be Substantially Completed as defined in the General Conditions; including that the construction is sufficiently completed in accordance with the Contract Documents, as modified by any change orders agreed to by the parties, so that the State of Utah can occupy the Project or specified area of the Project for the use for which it is intended.

The DFCM - (Owner) accepts the Project or specified area of the Project as Substantially Complete and will assume full possession of the Project or specified area of the Project at \_\_\_\_\_ (time) on \_\_\_\_\_ (date).

The DFCM accepts the Project for occupancy and agrees to assume full responsibility for maintenance and operation, including utilities and insurance, of the Project subject to the itemized responsibilities and/or exceptions noted below:

The Owner acknowledges receipt of the following closeout and transition materials:

☐ Record Drawings    ☐ O & M Manuals    ☐ Warranty Documents    ☐ Completion of Training Requirements

A list of items to be completed or corrected (Punch List) is attached hereto. The failure to include an item on it does not alter the responsibility of the Contractor to complete all the Work in accordance with the Contract Documents, including authorized changes thereof. The amount of \_\_\_\_\_. (Twice the value of the punch list work) shall be retained to assure the completion of the punch list work.

The Contractor shall complete or correct the Work on the list of (Punch List) items appended hereto within \_\_\_\_\_ calendar days from the above date of issuance of this Certificate. If the list of items is not completed within the time allotted the Owner has the right to be compensated for the delays and/or complete the work with the help of independent contractor at the expense of the retained project funds. If the retained project funds are insufficient to cover the delay/completion damages, the Owner shall be promptly reimbursed for the balance of the funds needed to compensate the Owner.

\_\_\_\_\_  
CONTRACTOR (include name of firm)    by: \_\_\_\_\_  
(Signature)    DATE

\_\_\_\_\_  
A/E (include name of firm)    by: \_\_\_\_\_  
(Signature)    DATE

\_\_\_\_\_  
USING INSTITUTION OR AGENCY    by: \_\_\_\_\_  
(Signature)    DATE

\_\_\_\_\_  
DFCM (Owner)    by: \_\_\_\_\_  
(Signature)    DATE

4110 State Office Building, Salt Lake City, Utah 84114  
telephone 801-538-3018 • facsimile 801-538-3267 • <http://dfcm.utah.gov>

cc: Parties Noted  
DFCM, Director

## **TECHNICAL SPECIFICATIONS JORDAN OHV PARK DEVELOPMENT**

### **Civil Specifications**

The Contractor shall install the water mains, irrigation mains, valves, trenching, fittings, appurtenances in accordance with the Manual of Standard Specifications APWA latest edition and all pertinent manufacturer's recommendations.

### **Electrical Specifications**

E16010	Basic Electrical Requirements
E16050	Basic Electrical Materials and Methods
E16110	Raceways

### **Pump Specifications**

27340	Pumps and Appurtenances
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## **SECTION 16010**

### **BASIC ELECTRICAL REQUIREMENTS**

#### **PART 1 - GENERAL**

##### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this and the other sections of Division 16.

##### **1.2 SUMMARY**

- A. This section includes general administrative and procedural requirements for electrical installations. The following administrative and procedural requirements are included in this Section to expand the requirements specified in Division 1:

- Submittals.
  - Workmanship.
  - Coordination drawings.
  - Record documents.
  - Drawings and Specifications.
  - Maintenance manuals.
  - Rough-ins.
  - Electrical installations.
  - Cutting and patching.

- B. Related Sections: The following sections contain requirements that relate to this section:

- Division 15 Section "ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT," for factory-installed motors, controllers, accessories, and connections.

- Division 16 Section "BASIC ELECTRICAL MATERIALS AND METHODS," for materials and methods common to the remainder of Division 16, plus general related specifications including:

- 1. Access to electrical installations.

##### **1.3 SUBSTITUTIONS**

- A. The equipment specified carries brand names and catalog numbers and shall be interpreted as establishing a standard of quality. Substitutions will be considered if a duplicate written application (2 copies) is at the office of the engineer as per general conditions of the specifications five working days prior to bid opening. The application shall include the following: 1) A statement declaring the equipment proposed is equal to that specified by having the same physical characteristics and dimensions, meet the drawings layout and structural conditions as well as load requirements; 2) The specified submittal catalog numbers of the equipments under consideration; 3) A pictorial and

specification brochure; 4) Sample may be required at engineers discretion; 5) Additional information as may be noted on drawings.

- B. Any conflict arising from the use of substituted equipment shall be the responsibility of the supplier, who shall bear all costs required to make the equipment comply with the intent of the plans and specifications.
- C. At the option of the Architect/Prime Engineer, samples may be required for non-standard items before installation during construction.
- D. No materials or apparatus shall be substituted after the bid opening except where the equipment manufacturer has been discontinued or delivery becomes a problem, then written approval of the Architect/Prime Engineer is required.

#### **1.4 SUBMITTALS**

- A. General: Follow the procedures specified in Division 1 Section "SUBMITTALS."
- B. Increase, by the quantity listed below, the number of electrical related shop drawings, product data, and samples submitted, to allow for required distribution plus two copies of each submittal required, which will be retained by the Electrical Consulting Engineer.
- C. Additional copies may be required by individual sections of these Specifications.

#### **1.5 WORKMANSHIP**

- A. All materials and equipment shall be installed in accordance with the recommendations of the manufacturer to conform with the contract documents. The installation shall be accomplished by workmen skilled in the type of work involved.
- B. The installation shall conform to the applicable rules of the National Electrical Code and National Electrical Safety Code except where more stringent requirements are noted in these specifications. Conflicts shall be brought to the attention of the Architect/Prime Engineer.
- C. The Contractor and Sub-contractors shall comply with OSHA and EPA Standards while in the performance of this contract.

#### **1.6 COORDINATION DRAWINGS**

- A. Prepare coordination drawings in accordance with Division 1 Section "PROJECT COORDINATION," to a scale of 1/4"=1'-0" or larger; detailing major elements, components, and systems of electrical equipment and materials in relationship with other systems, installations, and building components. Indicate locations where space is limited for installation and access and where sequencing and coordination of installations are of importance to the efficient flow of the Work, including (but not necessarily limited to) the following:
  - 1. Indicate the proposed locations of major raceway systems, equipment, and materials. Include the following:

Clearances for servicing equipment, including space for equipment disassembly required for periodic maintenance.

Exterior wall and foundation penetrations.

Fire-rated wall and floor penetrations.

Equipment connections and support details.

Sizes and location of required concrete pads and bases.

2. Indicate scheduling, sequencing, movement, and positioning of large equipment into the building during construction.

#### **1.7 RECORD DOCUMENTS**

- A. Prepare record documents in accordance with the requirements in Division 1 Section "PROJECT CLOSEOUT." In addition to the requirements specified in Division 1, indicate installed conditions for:
  1. Major raceway systems, size and location, for both exterior and interior; locations of control devices; distribution and branch electrical circuitry; and fuse and circuit breaker size and arrangements.
  2. Equipment locations (exposed and concealed), dimensioned from prominent building lines.

#### **1.8 DRAWINGS AND SPECIFICATIONS**

- A. Electrical drawings are diagrammatic, but shall be followed as closely as actual construction and work of other contractors will permit. Home runs shall be installed from outlets as shown on drawings.
- B. The contract drawings indicate the extent and the general location and arrangement of equipment, conduit, and wiring. The Contractor shall study plans and details so that equipment will be properly located and readily accessible. If any conflicts occur necessitating departures from the contract drawings, details of departures and reasons therefore shall be submitted to the Engineer for his prior approval.

#### **1.9 MAINTENANCE MANUALS**

- A. Prepare maintenance manuals in accordance with Division 1 Section "PROJECT CLOSEOUT." In addition to the requirements specified in Division 1, include the following information for equipment items:
- B. Description of function, normal operating characteristics and limitations, performance curves, engineering data and tests, and complete nomenclature and commercial numbers of replacement parts.

- C. Manufacturer's printed operating procedures to include start-up, break-in, and routine and normal operating instructions; regulation, control, stopping, shutdown, and emergency instructions; and summer and winter operating instructions.
- D. Maintenance procedures for routine preventative maintenance and troubleshooting; disassembly, repair, and reassembly; aligning and adjusting instructions.

**1.10 DELIVERY, STORAGE AND HANDLING**

- A. Deliver products to the project properly identified with names, model numbers, types, grades, compliance labels, and other information needed for identification.

**PART 2 - PRODUCTS (NOT APPLICABLE)**

**PART 3 - EXECUTION**

**3.1 ROUGH-IN**

- A. Verify final locations for rough-ins with field measurements and with the requirements of the actual equipment to be connected.
- B. Refer to equipment specifications in Divisions 2 through 16 for rough-in requirements.

**3.2 ELECTRICAL INSTALLATIONS**

- A. General: Sequence, coordinate, and integrate the various elements of electrical systems, materials, and equipment. Comply with the following requirements:
  - 1. Coordinate electrical systems, equipment, and materials installation with other building components.
  - 2. Verify all dimensions by field measurements.
  - 3. Arrange for chases, slots, and openings in other building components during progress of construction, to allow for electrical installations.
  - 4. Coordinate the installation of required supporting devices and sleeves to be set in poured-in-place concrete and other structural components, as they are constructed.
  - 5. Sequence, coordinate, and integrate installations of electrical materials and equipment for efficient flow of the Work. Give particular attention to large equipment requiring positioning prior to closing in the building.
  - 6. Where mounting heights are not detailed or dimensioned, install systems, materials, and equipment to provide the maximum headroom possible.
  - 7. Install systems, materials, and equipment to conform with approved submittal data, including coordination drawings, to greatest extent possible. Conform to arrangements indicated by the Contract Documents, recognizing that portions of the Work are shown only in diagrammatic

form. Where coordination requirements conflict with individual system requirements, refer conflict to the Architect/Prime Engineer.

8. Install systems, materials, and equipment level and plumb, parallel and perpendicular to other building systems and components, where installed exposed in finished spaces.
9. Install electrical equipment to facilitate servicing, maintenance, and repair or replacement of equipment components. As much as practical, connect equipment for ease of disconnecting, with minimum of interference with other installations.

### **3.3 CUTTING AND PATCHING**

- A. General: Perform cutting and patching in accordance with Division 1 Section "CUTTING AND PATCHING." In addition to the requirements specified in Division 1, the following requirements apply:
  1. Perform cutting, fitting, and patching of electrical equipment and materials required to:
  2. Uncover Work to provide for installation of ill-timed Work.
  3. Remove and replace defective Work.
  4. Remove and replace Work not conforming to requirements of the Contract Documents.
  5. Remove samples of installed Work as specified for testing.
  6. Install equipment and materials in existing structures.
  7. Upon written instructions from the Architect/Prime Engineer, uncover and restore Work to provide for Architect/Prime Engineer observation of concealed Work.
- B. Cut, remove, and legally dispose of selected electrical equipment, components, and materials as indicated, including but not limited to removal of electrical items indicated to be removed and items made obsolete by the new Work.
- C. Protect the structure, furnishings, finishes, and adjacent materials not indicated or scheduled to be removed.
- D. Provide and maintain temporary partitions or dust barriers adequate to prevent the spread of dust and dirt to adjacent areas.
- E. Protection of Installed Work: During cutting and patching operations, protect adjacent installations.
- F. Patch existing finished surfaces and building components using new materials matching existing materials and experienced Installers. Installers' qualifications refer to the materials and methods required for the surface and building components being patched.

- G. Refer to Division 1 Section "DEFINITIONS AND STANDARDS" for definition of experienced "Installer."
- H. Patch finished surfaces and building components using new materials specified for the original installation and experienced Installers. Installers' qualifications refer to the materials and methods required for the surface and building components being patched.
  - A. Refer to Division 1 Section "DEFINITIONS AND STANDARDS" for definition of experienced "Installer."
- I. Temporary Electric Services:
  - 1. The General Contractor doing the work shall make arrangements with the proper institution authority for all temporary utilities, including electricity.
  - 2. Provide temporary power, complete with metering and wiring for lighting and power outlets for construction tools and equipment. Report the initial meter reading to the institution, or otherwise as may be directed.
  - 3. Service shall be provided with a main disconnect and all 20 ampere receptacles protected by 20 amp GFI, single-pole. All temporary wiring shall meet NEC, Article 305, requirements. No attempt is made herein to specify construction power requirements for equipment in detail.
  - 4. As soon as permanent power and metering is available, the temporary power supply shall be disconnected and removed from the construction site.

END OF SECTION 16010

**SECTION 16050 - BASIC ELECTRICAL MATERIALS AND METHODS**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Requirements specified in Division 16 Section "Basic Electrical Requirements" apply to this Section.

**1.2 SUMMARY**

- A. This Section includes limited scope general construction materials and methods for application with electrical installations as follows:

Miscellaneous metals for support of electrical materials and equipment.

Joint sealers for sealing around electrical materials and equipment; and for sealing penetrations in fire and smoke barriers, floors, and foundation walls.

**1.3 DEFINITIONS**

- A. The following definitions apply to excavation operations:
  - 1. Additional Excavation: Where excavation has reached required subgrade elevations, if unsuitable bearing materials are encountered, continue excavation until suitable bearing materials are reached. The Contract Sum may be adjusted by an appropriate Contract Modification.
  - 2. Subbase: as used in this Section refers to the compacted soil layer used in pavement systems between the subgrade and the pavement base course material.
  - 3. Subgrade: as used in this Section refers to the compacted soil immediately below the slab or pavement system.
  - 4. Unauthorized excavation consists of removal of materials beyond indicated subgrade elevations or dimensions without specific direction from the Architect.
  - 5. Schedules indicating proposed methods and sequence of operations for selective demolition prior to commencement of Work. Include coordination for shut-off of electrical service, and details for dust and noise control. Method of procedure will be required for any work, any power rooms and power outages.
  - 6. Coordinate sequencing with construction phasing and Owner occupancy specified in Division 1 Section "Summary of Work."

**1.4 QUALITY ASSURANCE**

- A. Installer Qualifications: Engage an experienced Installer for the installation and application of joint sealers.

- B. Qualify welding processes and welding operators in accordance with AWS D1.1 "Structural Welding Code - Steel."
  - 1. Certify that each welder has satisfactorily passed AWS qualification tests for welding processes involved and, if pertinent, has undergone recertification.
- C. Provide UL Label on each fire-rated access door.
- D. Conditions Affecting Excavations: The following project conditions apply:
  - 1. Maintain and protect existing building services which transit the area affected by selective demolition.
  - 2. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by excavation operations.
- E. Site Information: Subsurface conditions were investigated during the design of the Project. Reports of these investigations are available for information only; data in the reports are not intended as representations or warranties of accuracy or continuity of conditions. The Owner will not be responsible for interpretations or conclusions drawn from this information.
- F. Existing Utilities: Locate existing underground utilities in excavation areas. If utilities are indicated to remain, support and protect services during excavation operations.
- G. Use of explosives is not permitted.
- H. Notify the Architect at least 5 days prior to commencing demolition operations.
- I. Perform demolition in phases as indicated.

## **PART 2 - PRODUCTS**

### **2.1 JOINT SEALERS**

- A. General: Joint sealers, joint fillers, and other related materials compatible with each other and with joint substrates under conditions of service and application.
- B. Available Products: subject to compliance with requirements, provide joint sealers of one of the following:

"3M" CP 25WB Caulk

## **PART 3 - EXECUTION**

### **3.1 PREPARATION FOR JOINT SEALERS**

- A. Surface Cleaning for Joint Sealers: Clean surfaces of joints immediately before applying joint sealers to comply with recommendations of joint sealer manufacturer.



### 3.2 EXCAVATION

- A. Slope sides of excavations to comply with local codes and ordinances. Shore and brace as required for stability of excavation.
- B. Shoring and Bracing: Establish requirements for trench shoring and bracing to comply with local codes and authorities. Maintain shoring and bracing in excavations regardless of time period excavations will be open.
- C. Remove shoring and bracing when no longer required. Where sheeting is allowed to remain, cut top of sheeting at an elevation of 30 inches below finished grade elevation.
- D. Install sediment and erosion control measures in accordance with local codes and ordinances.
- E. Dewatering: Prevent surface water and subsurface or ground water from flowing into excavations and from flooding project site and surrounding area.
- F. Do not allow water to accumulate in excavations. Remove water to prevent softening of bearing materials. Provide and maintain dewatering system components necessary to convey water away from excavations.
- G. Establish and maintain temporary drainage ditches and other diversions outside excavation limits to convey surface water to collecting or run-off areas. Do not use trench excavations as temporary drainage ditches.
- H. Material Storage: Stockpile satisfactory excavated materials where directed, until required for backfill or fill. Place, grade, and shape stockpiles for proper drainage.
- I. Locate and retain soil materials away from edge of excavations. Do not store within drip-line of trees indicated to remain.
- J. Remove and legally dispose of excess excavated materials and materials not acceptable for use as backfill or fill.
- K. Trenching: Excavate trenches for electrical installations as follows:
  - 1. Excavate trenches to the uniform width, sufficiently wide to provide ample working room and a minimum of 6 to 9 inches clearance on both sides of raceways and equipment.
  - 2. Excavate trenches to depth indicated or required.
  - 3. Limit the length of open trench to that in which installations can be made and the trench backfilled within the same day.
  - 4. Where rock is encountered, carry excavation below required elevation and backfill with a layer of crushed stone or gravel prior to installation of raceways and equipment. Provide a minimum of 6 inches of stone or gravel cushion between rock bearing surface and electrical installations.

5. Cold Weather Protection: Protect excavation bottoms against freezing when atmospheric temperature is less than 35 deg F (1 deg 2 C).
6. Backfilling and Filling: Place soil materials in layers to required subgrade elevations for each area classification listed below, using materials specified in Part 2 of this Section.

Under walks and pavements, use a combination of subbase materials and excavated or borrowed materials.

Under building slabs, use drainage fill materials.

Under piping and equipment, use subbase materials where required over rock bearing surface and for correction of unauthorized excavation.

7. Backfill excavations as promptly as work permits, but not until completion of the following:

Inspection, testing, approval, and locations of underground utilities have been recorded.

Removal of concrete formwork.

Removal of shoring and bracing, and backfilling of voids.

Removal of trash and debris.

- L. Placement and Compaction: Place backfill and fill materials in layers of not more than 8 inches in loose depth for material compacted by heavy equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.
- M. Before compaction, moisten or aerate each layer as necessary to provide optimum moisture content. Compact each layer to required percentage of maximum dry density or relative dry density for each area classification specified below. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice.
- N. Place backfill and fill materials evenly adjacent to structures, piping, and equipment to required elevations. Prevent displacement of raceways and equipment by carrying material uniformly around them to approximately same elevation in each lift.
- O. Compaction: Control soil compaction during construction, providing minimum percentage of density specified for each area classification indicated below.
- P. Percentage of Maximum Density Requirements: Compact soil to not less than the following percentages of maximum density for soils which exhibit a well-defined moisture-density relationship (cohesive soils), determined in accordance with ASTM D 1557 and not less than the following percentages of relative density, determined in accordance with ASTM D 2049, for soils which will not exhibit a well-defined moisture-density relationship (cohesionless soils).
- Q. Areas Under Structures, Building Slabs and Steps, Pavements: Compact top 12 inches of subgrade and each layer of backfill or fill material to 90 percent maximum density for cohesive material, or 95 percent relative density for cohesionless material.

- R. Areas Under Walkways: Compact top 6 inches of subgrade and each layer of backfill or fill material to 90 percent maximum density for cohesive material, or 95 percent relative density for cohesionless material.
- S. Other Areas: Compact top 6 inches of subgrade and each layer of backfill or fill material to 85 percent maximum density for cohesive soils, and 90 percent relative density for cohesionless soils.
- T. Moisture Control: Where subgrade or layer of soil material must be moisture conditioned before compaction, uniformly apply water. Apply water in minimum quantity necessary to achieve required moisture content and to prevent water appearing on surface during, or subsequent to, compaction operations.
- U. Subsidence: Where subsidence occurs at electrical installation excavations during the period 12 months after Substantial Completion, remove surface treatment (i.e., pavement, lawn, or other finish), add backfill material, compact to specified conditions, and replace surface treatment. Restore appearance, quality, and condition of surface or finish to match adjacent areas.

### **3.3 ERECTION OF METAL SUPPORTS AND ANCHORAGE**

- A. Cut, fit, and place miscellaneous metal fabrications accurately in location, alignment, and elevation to support and anchor electrical materials and equipment.
- B. Field Welding: Comply with AWS "Structural Welding Code."

### **3.4 ERECTION OF WOOD SUPPORTS AND ANCHORAGE**

- A. Cut, fit, and place wood grounds, nailers, blocking, and anchorage accurately in location, alignment, and elevation to support and anchor electrical materials and equipment.
- B. Select fastener sizes that will not penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood members.
- C. Attach to substrates as required to support applied loads.

### **3.5 APPLICATION OF JOINT SEALERS**

- A. General: Comply with joint sealer manufacturers' printed application instructions applicable to products and applications indicated, except where more stringent requirements apply.
- B. Installation of Fire-Stopping Sealant: Install sealant, including forming, packing, and other accessory materials, to fill openings around electrical services penetrating floors and walls, to provide fire-stops with fire-resistance ratings indicated for floor or wall assembly in which penetration occurs. Comply with installation requirements established by testing and inspecting agency.

END OF SECTION 16050

## **SECTION 16110 - RACEWAYS**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Requirements of the following Division 16 Sections apply to this Section:

"Basic Electrical Requirements."

"Basic Electrical Materials and Methods."

#### **1.2 SUMMARY**

- A. This Section includes raceways for electrical wiring. Types of raceways in this section include the following:

Electrical metallic tubing (EMT).  
Flexible metal conduit.  
Liquidtight flexible conduit.  
Underground plastic utilities duct.  
Rigid metal conduit.  
Rigid nonmetallic conduit.  
Surface raceways.

- B. Related Sections: The following Division 16 Sections contain requirements that relate to this Section:

"Wires and Cables" for other wiring methods.

"Supporting Devices" for raceway supports.

"Electrical Boxes and Fittings" for boxes used with conduit and tubing systems.

#### **1.3 QUALITY ASSURANCE**

- A. Electrical Component Standard: Components and installation shall comply with NFPA 70 1999 "National Electrical Code."
- B. NEMA Compliance: Comply with applicable requirements of NEMA standards pertaining to raceways.
- C. UL Compliance and Labeling: Comply with applicable requirements of UL standards pertaining to electrical raceway systems. Provide raceway products and components listed and labeled by UL, ETL, or CSA.

#### **1.4 SEQUENCING AND SCHEDULING**

- A. Coordinate with other Work, including metal and concrete deck installation, as necessary to interface installation of electrical raceways and components with other Work.

### **PART 2 - PRODUCTS**

**2.1 MANUFACTURERS**

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:

Conduit Bodies:

Adalet-PLM  
American Electric  
Appleton Electric Co.  
Carlson  
Crouse-Hinds Division, Cooper Industries, Inc.  
Delta Industrial Products  
Killark Electric Mfg. Co.  
Kraloy Products Co.  
O-Z/Gedney  
Spring City Electrical Mfg. Co.

Surface Metal Raceway:

Alrey-Thompson Co., Inc.  
Allied Tube & Conduit  
American Electric  
B-Line Systems, Inc.  
Butler Mfg. Co.  
Erickson Electrical Equipment Co.  
GS Metals Corp.  
Haydon Corp.  
Hoffman Engineering Co.  
Isoduct Energy Systems  
Isotrol Systems  
Keystone/Rees, Inc.  
SL Industries, Inc.  
Square D Co.  
The Wiremold Co.

**2.2 METAL CONDUIT AND TUBING**

- A. Rigid Steel Conduit: ANSI C80.1.
- B. Intermediate Steel Conduit: UL 1242 and NEMA RN 1.
- C. Electrical Metallic Tubing and Fittings: ANSI C80.3.
- D. Flexible Metal Conduit: UL 1, zinc-coated steel.
- E. Liquidtight Flexible Metal Conduit and Fittings: UL 360. Fittings shall be specifically approved for use with this raceway.

**2.3 NONMETALLIC CONDUIT AND DUCTS**

- A. Rigid Nonmetallic Conduit (RNC): NEMA TC 2 and UL 651, Schedule 40 or 80 PVC.
- B. PVC Conduit and Tubing Fittings: NEMA TC 3; match to conduit or conduit/tubing type and material.
- C. Conduit, Tubing, and Duct Accessories: Types, sizes, and materials complying with manufacturer's published product information. Mate and match accessories with raceway.

#### **2.4 CONDUIT BODIES**

- A. General: Types, shapes, and sizes as required to suit individual applications and NEC requirements. Provide matching gasketed covers secured with corrosion-resistant screws.
- B. Metallic Conduit and Tubing: Use metallic conduit bodies. Use bodies with threaded hubs for threaded raceways.
- C. Conduit Bodies 1 Inch and Smaller: Use bodies with screw-type EMT connectors.
- D. Nonmetallic Conduit and Tubing: Use nonmetallic conduit bodies conforming to UL 514 B.

#### **2.5 SURFACE RACEWAYS**

- A. General: Sizes and channels as indicated. Provide fittings that match and mate with raceway.
- B. Surface Metal Raceway: Construct of galvanized steel with snap-on covers, with 1/8-inch mounting screw knockouts in base approximately 8 inches o.c. Finish with manufacturer's standard prime coating suitable for painting. Provide raceways of types suitable for each application required.
- C. Conduit Sizes: All conduit shall be a minimum of 3/4" unless indicated on the drawings otherwise.

### **PART 3 - EXECUTION**

#### **3.1 WIRING METHOD**

- A. Outdoors and in the Mechanical Rooms: Use the following wiring methods:

Connection to Vibrating Equipment: Including motor-driven equipment: liquidtight flexible metal conduit.

Buried: PVC schedule 40 conduit. Conduit bends over 22° must be rigid steel.

- B. Indoors: Use the following wiring methods:

Connection to Vibrating Equipment: Including motor-operated equipment: flexible metal conduit.

Exposed: electrical metallic tubing.

Concealed: electrical metallic tubing.

#### **3.2 INSTALLATION**

- A. General: Install electrical raceways in accordance with manufacturer's written installation instructions, applicable requirements of NEC, and as follows:

Conceal Conduit and EMT, unless indicated otherwise, within finished walls, ceilings, and floors. Keep raceways at least 12 inches away from parallel runs of flues and steam or hot water pipes. Install raceways level and square and at proper elevations.

- B. Elevation of Raceway: Where possible, install horizontal raceway runs above water and steam piping.

Complete installation of electrical raceways before starting installation of conductors within raceways.

Provide supports for raceways as specified elsewhere in Division 16.

Prevent foreign matter from entering raceways by using temporary closure protection.

Protect stub-ups from damage where conduits rise from floor slabs. Arrange so curved portion of bends is not visible above the finished slab.

Make bends and offsets so the inside diameter is not effectively reduced. Unless otherwise indicated, keep the legs of a bend in the same plane and the straight legs of offsets parallel. For all bends under the ground, use rigid galvanized steel conduit.

Use raceway fittings that are of types compatible with the associated raceway and suitable for the use and location. For electrical metallic tubing (EMT), use rigid steel set screw type fittings (screw must have a full set) except as otherwise indicated. Die-cast fittings shall not be used. Box connectors 1" and larger shall be insulated, throat type or equal type plastic bushing. The use of the indenter-type fittings shall be prohibited. Fittings in the concrete shall be compression type and taped or approved for such use.

Run concealed raceways with a minimum of bends in the shortest practical distance considering the type of building construction and obstructions except as otherwise indicated. This does not apply to conduits in crawl spaces.

- C. Raceways embedded in slabs: Install in middle third of the slab thickness where practical and leave at least 1 inch concrete cover. Tie raceways to reinforcing rods or otherwise secure them to prevent sagging or shifting during concrete placement. Space raceways laterally to prevent voids in the concrete. Run conduit larger than 1-inch trade size, parallel with or at right angles to the main reinforcement; where at right angles to the reinforcement, the conduit shall be close to one of the supports of the slab. Where nonmetallic conduit or tubing is used, raceways must be converted to rigid steel conduit before rising above floor. No PVC allowed above grade nor penetrating structural elements. Conduits through the floor, concrete and/or earth shall be wrapped with PVC tape or other approved coating.
- D. Install exposed raceways parallel and perpendicular to nearby surfaces or structural members and follow the surface contours as much as practical.
- E. Run exposed, parallel, or banked raceways together. Make bends in parallel or banked runs from the same center line so that the bends are parallel. Factory elbows may be used in banked runs only where they can be installed parallel. This requires that there be a change in the plane of the run such as from

wall to ceiling and that the raceways be of the same size. In other cases provide field bends for parallel raceways.

- F. Join raceways with fittings designed and approved for the purpose and make joints tight. Where joints cannot be made tight, use bonding jumpers to provide electrical continuity of the raceway system. Make raceway terminations tight. Where terminations are subject to vibration, use bonding bushings or wedges to assure electrical continuity. Where subject to vibration or dampness, use insulating bushings to protect conductors.

Tighten set screws of threadless fittings with suitable tool.

- G. Terminations: Double locknuts and plastic bushing shall be used with all IMC and rigid conduits.
- H. Where terminating in threaded hubs, screw the raceway or fitting tight into the hub so the end bears against the wire protection shoulder. Where chase nipples are used, align the raceway so the coupling is square to the box, and tighten the chase nipple so no threads are exposed.
- I. Raceway Expansion Fittings, shall be installed on all raceway runs that cross a building expansion joint. The fittings shall be OZ type "AX" or approved equal, sized to raceway. Conduits 1" and larger install OZ type "B" connectors.
- J. Install pull wires in empty raceways. Use monofilament plastic line having not less than 200-lb tensile strength. Leave not less than 12 inches of slack at each end of the pull wire.
- K. Telephone and Signal System Raceways 2-Inch Trade Size and Smaller: In addition to the above requirements, install raceways 2-inch and smaller trade size in maximum lengths at 150 feet and with a maximum of two, 90-deg bonds or equivalent. Install pull or junction boxes where necessary to comply with these requirements.
- L. Install raceway sealing fittings in accordance with the manufacturer's written instructions. Locate fittings at suitable, approved, accessible locations and fill them with UL- listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces. Install raceway sealing fittings at the following points and elsewhere as indicated:

Where conduits pass from warm locations to cold locations, such as the boundaries of refrigerated spaces and air-conditioned spaces.

Where required by the NEC.

- M. Stub-up Connections: Extend conduits through concrete floor for connection to freestanding equipment with an adjustable top or coupling threaded inside for plugs and set flush with the finished floor. Extend conductors to equipment with rigid steel conduit; flexible metal conduit may be used 6 inches above the floor. Where equipment connections are not made under this contract, install screwdriver-operated threaded flush plugs flush with floor.
- N. Flexible Connections: Use short length (maximum of 6 ft.) of flexible conduit for recessed and semirecessed lighting fixtures, for equipment subject to vibration, noise transmission, or movement; and for all motors. Install separate ground conductor across flexible connections. Aluminum flexible conduits shall not be used.



- O. Surface Metal Raceway: Install a separate green ground conductor in raceway from the junction box supplying the raceway to receptacle or fixture ground terminals.
- P. Select each surface metal raceway outlet box to which a lighting fixture is attached to be of sufficient diameter to provide a seat for the fixture canopy.
- Q. Install Accessible Junction Boxes: or conduits in conduits runs as required at 100 ft. intervals on long runs. Each junction box shall be supported independent of the conduit.
- R. Install From Each Recessed Branch Panel, five spare 3/4" conduits (capped) into the ceiling and floor space, when the floor space is not accessible, run six into the ceiling.

3.3 ADJUSTING AND CLEANING

- A. Upon completion of installation of raceways, inspect interiors of raceways; clear all blockages and remove burrs, dirt, and construction debris.

END OF SECTION 16110

## **SECTION 27340**

### **SPECIFICATION FOR CLOSE-COUPLED VERTICAL TURBINE WATER BOOSTER SYSTEM DUPLEX**

Furnish and install a **TIGERFLOW** Series VTP-5000 (Duplex) Model # DVTBV-25SM-A1-S4 U.L./C-U.L. or approved equal. Listed Engineered packaged water Booster System. The system shall be rated for a system flow of 400 GPM at a system pressure of 120 PSIG boost.

#### **PUMP(S) & MOTOR(S)**

Pump(s) shall be Vertical turbine pump(s) complete with: Cast Iron flanged discharge head, removeable mechanical seal box with type 21 mechanical seal and bronze shaft sleeve, stainless steel motor shaft, stainless steel coupling, coupling guard, and bronze steady bushing. The bowl assembly shall consist of enameled bowls, bronze impellers, bronze bowl bearings and stainless steel pump shaft. Pump barrels shall be welded steel with corrosion inhibiting lining and cleanout.

**Note: The mechanical seal shall be replaceable without removing motor.**

Pump No. 1 shall be **Simmons Model** SP6C-4, 200 GPM at 289' TDH, 25 HP, 75% efficient at design point or approved equal

Pump No. 2 shall be **Simmons Model** SG8C-3, 300 GPM at 225' TDH, 25 HP, 75% efficient at design point or approved equal

#### **Motor(s)**

Motor(s) shall be vertical hollow shaft, WP-1 enclosure, copper wound, NEMA design B with a 1.15 service factor complete with non-reverse ratchet or approved equal.

3600 RPM \_\_\_\_\_ VOLT, 3 PHASE, 60 HERTZ.

#### **VALVES**

Isolation Valves: Individual pump suction and discharge valves shall be provided (Full Port Ball Valve(s)) (Lug Style Butterfly Valve(s) with Lever handle(s)). Control Valves: Provide a combination pressure regulating and non-slam check valve on the discharge of each pump. Valve shall be complete with fused epoxy coating inside and out, stainless steel internals, stainless steel braided piloting and stainless steel cover bolting.

#### **OVER-TEMPERATURE PROTECTION**

Each pump shall be equipped with an individual combination type non-electric temperature probe and purge assembly.

#### **U.L. LISTED POWER AND CONTROL PANEL**

(1) U.L. Listed, **Nema 4**, Tiger's Eye **Mark II**, Solid State, Power and Control Panel

(\*) U.L./C-U.L. 508 Label

(\*) Micro Controller:

-**Flash** Main Memory

-**EEPROM** Memory For All User Setpoints

-Multi Level Security

(\*) Panel Face Mounted, LCD back lite 4-Line Operator Interface with embossed sealed membranes 20 Button Touch Pad

Functions Included:

- Pressure Sequencing with Read-out in PSI
- Suction and Discharge Pressure Read-out in PSI
- Individual Pump Run Indication
- H-O-A Selectors
- ETM's
- Low Suction Alarm with TDR
- Low System with TDR
- High Suction Shutdown and TDR
- High System Alarm with TDR
- Automatic Alternation of Equal Sized Pumps
- (2) Thru Door Disconnect(s) with Individual Motor Circuit Protection
- (2) FVNR magnetic starters with 3-leg overload protection
- (\*) 12 Volt U.L./C-U.L., CE Approved Switching Power Supply. Unit Must Have Built-In Breaker Bar with Over Demand Protection
- (\*) 120 Volt Fused Control Circuit Transformer
- (1) Power on Light
- (1) Common Auxiliary Alarm Contact
- (2) Panel Mounted **Stainless Steel** Pressure Transducers [(1) Suction, (1) Discharge]

### **LAG PUMP SEQUENCING**

Each lag pump shall be sequenced by: (Pressure sequencing with programmable minimum run timers and time delay relays).

NOTE: Pressure switches in lieu of pressure transducers will not be allowed.

### **TANK LOCATION AND LEAD PUMP SEQUENCING**

The Hydro-Pneumatic tank shall be (adjacent to system) with feed line between lead pump(s) PRV(s) and check valve(s). Note: Adjacent mounting requires contractor field connection.

### **HYDRO-PNEUMATIC TANK**

Provide a Section VIII, ASME CODE, National Board stamped, Hydro-Pneumatic tank. Tank shall be provided complete with a FDA approved replaceable bladder, bottom connection, air fill valve, and gauge. Tank shall be: (MODEL TF-185, 185 GAL., 200 PSI).

### **FACTORY PREFABRICATION**

Provide each system as a complete package system on a structural steel mounting frame, piped, tubed, mounted and wired. Unit shall be factory primed and painted with machine grade finish coat. All welding shall be performed by ASME Section 9 certified welders. System shall be (Vertical) construction.

Suction and discharge headers shall be: 4" Stainless Steel

Note: (1) Vertical construction available only in galvanized or stainless steel header configuration.

(2) System manufacturer shall isolate all ferrous from all non-ferrous materials.

### **THIRD PARTY TESTING, OSHA REQUIREMENT**

The package shall be UL Listed as a system for its intended use, so meeting OSHA Federal Regulations 29 CFR 1910.303 and 399 as well as NFPA Pamphlet #70 (National Electric Code) Article 90-7, City of Los Angeles Approval Code, CMR248 Massachusetts State Plumbing Code Approval.

### **FACTORY TEST**

The package shall be electrically and hydrostatically tested before shipment, in addition, each system shall be factory tested from 0-100% of flow and pressure.

### **STARTUP**

The factory authorized local representative shall provide (2) hours of startup and field training.

## **WARRANTY**

Each **TIGERFLOW** system, or approved equal, shall be warranted for a period of (18) months from date of shipment or (12) months from date of startup, whichever occurs first.

## **SUBMITTALS & INSURANCE CERTIFICATIONS**

Submittals shall be in accordance with requirements of general specifications. Submit 6 copies to the engineer for approval. All submittals must include the following:

- Complete shop drawings and complete wiring diagrams. All drawings must be AUTOCADD Release 14; complete with full mechanical Desk Top 3-D drawings in both hardcopy and disk format. Complete operating and maintenance instructions.
- Furnish written certification of the manufacturers listing with Underwriters Laboratories as an approved manufacturer of control panels.
- Furnish written certification that the manufacturer is listed by UL/C-UL as an approved manufacturer of factory assembled pumping systems.
- A complete, easily readable functional description of the proposed equipment.
- Upon completion of the installation, the results of the field and acceptance tests as specified under this section of the specification shall be submitted to the engineer.
- Furnished written certification from the manufacturers representative of the proper installation of the station.
- Provide written certification that, a nationally recognized manufacturer of package pump systems, manufactures the pump system. A corporate officer must sign this certification.
- Operation and maintenance manuals:  
Submit complete operations and maintenance information for this specific equipment. The engineer shall review these manuals for completeness. They shall include complete parts list including manufacturers reference and ordering number, the local representative name, address and phone number, the model and serial number of the system.
- The manufacturers shall submit a certificate of product liability insurance for no less than one million dollars (\$1,000,000)

## **QUALITY ASSURANCE**

- All equipment under this section shall be furnished by a single supplier and shall be products that the manufacturer regularly engages in. The supplier shall have sole responsibility for proper functioning of the system and equipment supplied.
- Equipment shall be a manufacturer's standard product presently in commercial production.
- The manufacturer shall have in place a quality assurance program to assure the quality of the material furnished.

## **CONTRACTOR AND SUPPLIER QUALIFICATIONS**

- The manufacturer shall have a minimum of ten years manufacturing and application experience.
- Upon request from the engineer, the pump station manufacturer shall demonstrate proof of financial responsibility with respect to performance and delivery date.
- Upon request from the engineer, the pump station manufacturer shall provide proof or evidence of facilities, equipment and skills required to produce the equipment specified herein